

WHAT IS CLAIMED IS:

1. A microcomputer comprising a USB interface circuit for interfacing data transmission and receipt between a host and the microcomputer, a nonvolatile memory for program storage which can electrically carry out rewrite and read, a data memory for temporarily storing program data transmitted from the host which are parallel converted by the USB interface circuit, and a CPU for executing a program instruction read from the nonvolatile memory,
5
- 10 wherein the nonvolatile memory for program storage has a first program area storing a write control program and a second program area to which the program data are to be written, and the program data stored temporarily in the data memory are written to the second program area in accordance with the write control program stored in the first program area.
15
- 20 2. The microcomputer according to claim 1, further comprising a program counter for controlling an address of the nonvolatile memory for program storage, a value of the program counter being caused to jump to a starting address of the first program area in response to a reset of the microcomputer.
- 25 3. The microcomputer according to claim 1, wherein the data memory is a RAM.
4. The microcomputer according to claim 3, wherein the RAM

is accessible from the USB interface circuit and the CPU.

5. The microcomputer according to claim 4, further comprising an address selecting circuit for selecting a first address signal output from the USB interface circuit and a second address signal output from the CPU and inputting the address signal to an address decoder of the RAM, a data area of the RAM being accessible from the USB interface circuit and the CPU.

10 6. The microcomputer according to claim 5, wherein the address selecting circuit selects the first address signal output from the USB interface circuit during receipt of data from the host.

15 7. A microcomputer comprising:
a USB interface circuit for interfacing data transmission and receipt between a host and the microcomputer;
a temporary register for transmission and receipt which is provided in the USB interface circuit and serves to temporarily store data; and

20 a RAM which is accessible from the CPU and the temporary register for transmission and receipt in the microcomputer,
wherein data transfer is carried out between the temporary register and the RAM.

25 8. The microcomputer according to claim 7, further comprising an address selecting circuit for selecting a first address signal

output from the USB interface circuit and a second address signal output from the CPU and inputting the address signal to an address decoder of the RAM, a data area of the RAM being accessible from the USB interface circuit and the CPU.

5

9. The microcomputer according to claim 8, wherein the address selecting circuit selects the first address signal output from the USB interface circuit during receipt of data from the host.

10 10. A microcomputer comprising a USB interface circuit for interfacing data transmission and receipt between a host and the microcomputer, a nonvolatile memory for program storage which can electrically carry out rewrite and read, and a CPU for executing a program read from the nonvolatile memory,

15 wherein a specific memory area for storing identification information to specify a vendor of the microcomputer is provided in the nonvolatile memory and the identification information read from the specific memory area is transmitted to the host through the USB interface circuit during initialization of a
20 USB.

25 11. The microcomputer according to claim 10, wherein the nonvolatile memory has a first program area storing a write control program and a second program area to which program data are to be written, and the program data are written to the second program area in accordance with the write control program stored in the

first program area.

12. The microcomputer according to claim 11, wherein the specific memory area of the nonvolatile memory in which the 5 identification information is to be stored is provided adjacently to the first program area.

13. A method of controlling a microcomputer comprising a USB interface circuit for interfacing data transmission and receipt 10 between a host and the microcomputer, a nonvolatile memory having a first program area storing a write control program and a second program area to which program data are to be written and capable of electrically carrying out rewrite and read, and a CPU for executing a program read from the nonvolatile memory, comprising:

15 a first step of starting execution of the write control program in response to a reset of the microcomputer, a second step of executing initialization of a USB, a third step of writing program data from the host to the second program area of the nonvolatile memory, and a fourth step of executing a program 20 written to the second program area.

14. A method of controlling a microcomputer according to claim 13, wherein the microcomputer is reset by power-on reset.

25 15. A method of controlling a microcomputer according to claim 13, further comprising a step of deciding whether or not

program data are to be rewritten from the host after the fourth step, wherein when the rewrite is to be carried out, the first to fourth steps are repeated again to rewrite the program data from the host to the second program area of the nonvolatile memory

5 and to execute a program thus rewritten.

16. A method of controlling a microcomputer according to claim 13, further comprising a step of writing collating code data to a specific area in the second program area after the

10 third step and a step of comparing data in the specific area with the collating code data after the first step, the third step being executed if both of them are not coincident with each other and program data are not rewritten from the host to the second program area of the nonvolatile memory but a program written

15 to the second program area is executed if both of them are coincident with each other.